

**Caerus Oil and Gas**

Sample Delivery Group: L1437907  
Samples Received: 12/03/2021  
Project Number: HGPG  
Description: Hatch Gulch Pig Launcher  
Site: HGPG  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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<sup>1</sup> Cp
<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
<sup>5</sup> Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
<sup>9</sup> Sc

# SAMPLE SUMMARY

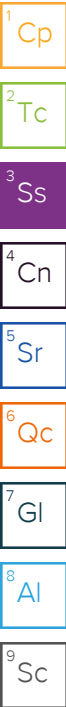
## 20211201-HATCHGULTCH(PH-1)@1'-2' L1437907-01 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 10:35

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:43	12/08/21 20:43	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 12:57	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:54	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 12:57	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:17	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 11:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:01	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:16	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/08/21 23:44	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-1)@3'-4' L1437907-02 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 10:50

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:46	12/08/21 20:46	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:56	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:00	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:20	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 12:06	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:20	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:29	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:02	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-1)@5'-6' L1437907-03 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:00

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:49	12/08/21 20:49	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:02	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:58	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:02	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:23	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 12:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:56	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:20	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

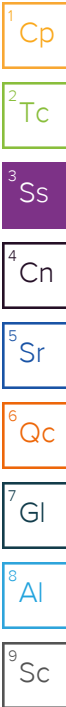
## 20211201-HATCHGULTCH(PH-2)@1'-2' L1437907-04 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:08

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:52	12/08/21 20:52	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:00	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:05	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:25	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787329	1	12/10/21 11:07	12/10/21 17:20	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:58	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:37	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:38	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-2)@3'-4' L1437907-05 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:15

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:55	12/08/21 20:55	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:02	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 12:18	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:28	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 12:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 13:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:02	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:43	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:55	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-2)@5'-6' L1437907-06 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:20

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:58	12/08/21 20:58	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:08	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:57	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:04	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:08	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:36	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 13:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:20	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:10	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:13	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

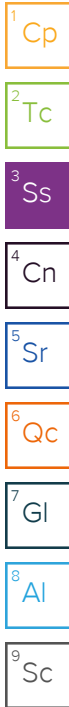
## 20211201-HATCHGULTCH(PH-3)@1'-2' L1437907-07 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:25

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:06	12/08/21 21:06	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:50	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:37	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:39	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 02:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:40	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:24	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:31	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-3)@3'-4' L1437907-08 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:33

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:09	12/08/21 21:09	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:52	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:40	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:42	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:27	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 02:51	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:59	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 04:26	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:49	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-3)@5'-6' L1437907-09 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:40

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:12	12/08/21 21:12	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:54	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:43	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:44	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:30	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 15:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:18	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:06	12/06/21 03:18	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:06	AGW	Mt. Juliet, TN



# SAMPLE SUMMARY

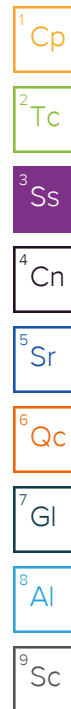
## 20211201-HATCHGULTCH(PH-4)@1'-2' L1437907-10 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:45

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:14	12/08/21 21:14	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:56	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:46	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:47	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:33	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 15:24	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 04:12	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:24	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-4)@3'-4' L1437907-11 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:50

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:17	12/08/21 21:17	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:57	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:48	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:50	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 03:12	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 02:51	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:42	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-4)@5'-6' L1437907-12 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 12:00

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:20	12/08/21 21:20	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:59	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:51	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:53	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 16:07	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 02:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 03:04	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 03:00	AGW	Mt. Juliet, TN

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward  
Project Manager



Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	14.1		1	12/08/2021 20:43	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	12.9		0.133	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.54	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

Sample Narrative:  
L1437907-01 WG1784409: 8.54 at 18.2C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1650		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-01 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 09:54	<a href="#">WG1784925</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	125		0.0852	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Cadmium	0.165	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Chromium	12.9		0.133	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Copper	8.23		0.400	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Lead	5.63		0.208	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Nickel	17.2		0.132	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Selenium	0.903	<a href="#">J</a>	0.764	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Zinc	24.6		0.832	5.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	1.05		0.0167	0.200	1	12/08/2021 18:17	<a href="#">WG1784346</a>

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.12		0.100	1.00	5	12/08/2021 13:27	<a href="#">WG1785874</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0298	<u>J</u>	0.0217	0.100	1	12/09/2021 11:44	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/09/2021 11:44	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Toluene	0.00210	<u>J</u>	0.00130	0.00500	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Total Xylenes	0.000891	<u>J</u>	0.000880	0.00650	1	12/07/2021 07:01	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	99.7			75.0-131		12/07/2021 07:01	<a href="#">WG1784981</a>
(S) <i>4-Bromofluorobenzene</i>	99.2			67.0-138		12/07/2021 07:01	<a href="#">WG1784981</a>
(S) <i>1,2-Dichloroethane-d4</i>	103			70.0-130		12/07/2021 07:01	<a href="#">WG1784981</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.29	<u>B J</u>	0.769	4.00	1	12/06/2021 01:16	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	73.1			18.0-148		12/06/2021 01:16	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	96.7			23.0-120		12/08/2021 23:44	<a href="#">WG1785524</a>
(S) <i>Nitrobenzene-d5</i>	78.2			14.0-149		12/08/2021 23:44	<a href="#">WG1785524</a>
(S) <i>2-Fluorobiphenyl</i>	89.6			34.0-125		12/08/2021 23:44	<a href="#">WG1785524</a>

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.5		1	12/08/2021 20:46	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	25.6		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.61	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-02 WG1784409: 8.61 at 18.2C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1520		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-02 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 09:56	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	200		0.0852	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Cadmium	0.197	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Chromium	25.6		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Copper	10.4		0.400	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Lead	7.69		0.208	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Nickel	14.9		0.132	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Selenium	1.07	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Zinc	35.7		0.832	5.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.05		0.0167	0.200	1	12/08/2021 18:20	<a href="#">WG1784346</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.73		0.100	1.00	5	12/08/2021 13:30	<a href="#">WG1785874</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0255	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 12:06	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 12:06	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Toluene	0.00288	<a href="#">J</a>	0.00130	0.00500	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Total Xylenes	0.00140	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	98.3			75.0-131		12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>4</i> -Bromofluorobenzene	97.8			67.0-138		12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	104			70.0-130		12/07/2021 07:20	<a href="#">WG1784981</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.15	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 01:29	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	47.1			18.0-148		12/06/2021 01:29	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	66.3			23.0-120		12/09/2021 00:02	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	59.2			14.0-149		12/09/2021 00:02	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	65.1			34.0-125		12/09/2021 00:02	<a href="#">WG1785524</a>

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	9.21		1	12/08/2021 20:49	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	30.0		0.133	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.45	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-03 WG1784409: 8.45 at 18.3C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1290		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-03 WG1784566: at 25C

## Mercury by Method 7471A

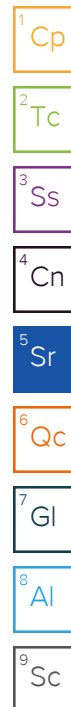
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 09:58	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	209		0.0852	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Cadmium	0.226	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Chromium	30.0		0.133	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Copper	12.7		0.400	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Lead	9.02		0.208	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Nickel	17.0		0.132	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Selenium	1.45	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Zinc	40.7		0.832	5.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.22		0.0167	0.200	1	12/08/2021 18:23	<a href="#">WG1784346</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.18		0.100	1.00	5	12/08/2021 13:33	<a href="#">WG1785874</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0293	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 12:27	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 12:27	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Toluene	0.00320	<a href="#">J</a>	0.00130	0.00500	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Total Xylenes	0.00158	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>4</i> -Bromofluorobenzene	97.6			67.0-138		12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	102			70.0-130		12/07/2021 07:39	<a href="#">WG1784981</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.43	<a href="#">B</a>	0.769	4.00	1	12/06/2021 01:56	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	63.9			18.0-148		12/06/2021 01:56	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	85.8			23.0-120		12/09/2021 00:20	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	66.0			14.0-149		12/09/2021 00:20	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	79.7			34.0-125		12/09/2021 00:20	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.8		1	12/08/2021 20:52	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	18.6		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:54	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.42	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-04 WG1784409: 9.42 at 18.4C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1750		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-04 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 10:00	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	173		0.0852	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Cadmium	0.255	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Chromium	18.6		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Copper	9.94		0.400	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Lead	6.86		0.208	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Nickel	15.2		0.132	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Selenium	U		0.764	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Zinc	34.7		0.832	5.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	2.28		0.0167	0.200	1	12/08/2021 18:25	<a href="#">WG1784346</a>

<sup>1</sup> Cp<sup>2</sup> Tc<sup>3</sup> Ss<sup>4</sup> Cn<sup>5</sup> Sr<sup>6</sup> Qc<sup>7</sup> Gl<sup>8</sup> Al<sup>9</sup> Sc



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.91		0.100	1.00	5	12/08/2021 13:37	<a href="#">WG1785874</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0286	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 17:20	<a href="#">WG1787329</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	105			77.0-120		12/10/2021 17:20	<a href="#">WG1787329</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Toluene	0.00303	<a href="#">J</a>	0.00130	0.00500	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Total Xylenes	0.00117	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 07:58	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 07:58	<a href="#">WG1784981</a>
(S) <i>4</i> -Bromofluorobenzene	95.9			67.0-138		12/07/2021 07:58	<a href="#">WG1784981</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	100			70.0-130		12/07/2021 07:58	<a href="#">WG1784981</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.08	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:37	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	54.5			18.0-148		12/06/2021 02:37	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	83.8			23.0-120		12/09/2021 00:38	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	66.2			14.0-149		12/09/2021 00:38	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	75.3			34.0-125		12/09/2021 00:38	<a href="#">WG1785524</a>

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.90		1	12/08/2021 20:55	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	27.0		0.133	1.00	1	12/08/2021 12:54	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:54	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.45	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-05 WG1784409: 8.45 at 19.7C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	883		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-05 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 10:02	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	160		0.0852	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Cadmium	0.138	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Chromium	27.0	<a href="#">O1</a>	0.133	1.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Copper	7.85		0.400	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Lead	6.94		0.208	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Nickel	13.9		0.132	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Selenium	1.70	<a href="#">J</a>	0.764	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Zinc	32.3		0.832	5.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.411		0.0167	0.200	1	12/08/2021 18:28	<a href="#">WG1784346</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.00	<a href="#">Q1</a>	0.100	1.00	5	12/08/2021 12:37	<a href="#">WG1785874</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0362	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 13:10	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 13:10	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Toluene	0.00337	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Total Xylenes	0.00139	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	102			75.0-131		12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	96.4			67.0-138		12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	98.0			70.0-130		12/07/2021 00:02	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.926	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 01:43	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	67.9			18.0-148		12/06/2021 01:43	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	85.0			23.0-120		12/09/2021 00:55	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	64.3			14.0-149		12/09/2021 00:55	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	79.0			34.0-125		12/09/2021 00:55	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	6.34		1	12/08/2021 20:58	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium, Trivalent	26.4		0.133	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:57	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.36	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-06 WG1785392: 8.36 at 18.7C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1280		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-06 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 10:04	<a href="#">WG1784925</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	163		0.0852	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Cadmium	0.109	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Chromium	26.4		0.133	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Copper	8.24		0.400	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Lead	7.07		0.208	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Nickel	14.3		0.132	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Selenium	0.962	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Zinc	33.8		0.832	5.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.861		0.0167	0.200	1	12/08/2021 18:36	<a href="#">WG1784346</a>

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.74		0.100	1.00	5	12/08/2021 13:40	<a href="#">WG1785874</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0339	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 13:32	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 13:32	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Toluene	0.00322	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Total Xylenes	0.00131	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:20	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 00:20	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/07/2021 00:20	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		12/07/2021 00:20	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.39	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:10	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	63.5			18.0-148		12/06/2021 02:10	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	76.5			23.0-120		12/09/2021 01:13	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	49.2			14.0-149		12/09/2021 01:13	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	63.7			34.0-125		12/09/2021 01:13	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	8.08		1	12/08/2021 21:06	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	26.2		0.133	1.00	1	12/08/2021 12:58	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:58	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.39	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-07 WG1785392: 8.39 at 18.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1370		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-07 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 08:50	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	155		0.0852	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Cadmium	0.128	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Chromium	26.2		0.133	1.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Copper	8.25		0.400	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Lead	7.46		0.208	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Nickel	13.4		0.132	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Zinc	32.7		0.832	5.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.426		0.0167	0.200	1	12/08/2021 18:39	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.03		0.100	1.00	5	12/06/2021 23:23	<a href="#">WG1784892</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0424	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 02:29	<a href="#">WG1787003</a>
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120		12/10/2021 02:29	<a href="#">WG1787003</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Toluene	0.00329	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Total Xylenes	0.00158	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:40	<a href="#">WG1784988</a>
(S) Toluene-d8	103			75.0-131		12/07/2021 00:40	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	101			67.0-138		12/07/2021 00:40	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	107			70.0-130		12/07/2021 00:40	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.40	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:24	<a href="#">WG1784356</a>
(S) o-Terphenyl	67.0			18.0-148		12/06/2021 02:24	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	90.9			23.0-120		12/09/2021 01:31	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	64.9			14.0-149		12/09/2021 01:31	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	80.0			34.0-125		12/09/2021 01:31	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.12		1	12/08/2021 21:09	WG1784351

1  
Cp

2  
Tc

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	22.9		0.133	1.00	1	12/08/2021 12:58	<a href="#">WG1784894</a>

3  
Ss

4  
Cn

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:58	<a href="#">WG1784664</a>

5  
Sr

6  
Qc

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.88	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

7  
Gl

8  
Al

Sample Narrative:

L1437907-08 WG1784899: 7.88 at 16.4C

9  
Sc

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1850		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:

L1437907-08 WG1784566: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 08:52	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	222		0.0852	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Cadmium	0.243	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Chromium	22.9		0.133	1.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Copper	13.1		0.400	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Lead	9.45		0.208	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Nickel	14.4		0.132	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Selenium	1.16	<a href="#">J</a>	0.764	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Zinc	37.7		0.832	5.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.531		0.0167	0.200	1	12/08/2021 18:42	<a href="#">WG1784346</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.37		0.100	1.00	5	12/06/2021 23:27	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0416	J	0.0217	0.100	1	12/10/2021 02:51	<a href="#">WG1787003</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	106			77.0-120		12/10/2021 02:51	<a href="#">WG1787003</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Toluene	0.00340	B J	0.00130	0.00500	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Total Xylenes	0.00178	J	0.000880	0.00650	1	12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	98.4			67.0-138		12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	103			70.0-130		12/07/2021 00:59	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	8.35	B	0.769	4.00	1	12/06/2021 04:26	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	67.2			18.0-148		12/06/2021 04:26	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	95.6			23.0-120		12/09/2021 01:49	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	68.2			14.0-149		12/09/2021 01:49	<a href="#">WG1785524</a>
(S) <i>2</i> -Fluorobiphenyl	85.4			34.0-125		12/09/2021 01:49	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	1.67		1	12/08/2021 21:12	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	26.7		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U	<a href="#">J5 J6 O1</a>	0.640	2.00	1	12/08/2021 13:00	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.21	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

Sample Narrative:  
L1437907-09 WG1784899: 8.21 at 16.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1080		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-09 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	0.0205	<a href="#">J</a>	0.0180	0.0400	1	12/08/2021 08:54	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	180		0.0852	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Cadmium	0.159	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Chromium	26.7		0.133	1.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Copper	10.2		0.400	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Lead	8.19		0.208	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Nickel	14.3		0.132	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Zinc	35.9		0.832	5.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.564		0.0167	0.200	1	12/08/2021 18:44	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.30		0.100	1.00	5	12/06/2021 23:30	<a href="#">WG1784892</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0313	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 15:02	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/09/2021 15:02	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

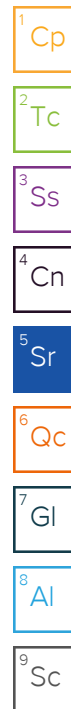
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Toluene	0.00317	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Total Xylenes	0.000916	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:18	<a href="#">WG1784988</a>
(S) Toluene-d8	101			75.0-131		12/07/2021 01:18	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	98.4			67.0-138		12/07/2021 01:18	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	97.6			70.0-130		12/07/2021 01:18	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.08	<a href="#">B J J3</a>	0.769	4.00	1	12/06/2021 03:18	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	47.1			18.0-148		12/06/2021 03:18	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	83.7			23.0-120		12/09/2021 02:06	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	65.3			14.0-149		12/09/2021 02:06	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	77.9			34.0-125		12/09/2021 02:06	<a href="#">WG1785524</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.43		1	12/08/2021 21:14	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	22.8		0.133	1.00	1	12/08/2021 13:04	<a href="#">WG1784894</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 13:04	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.55	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

## Sample Narrative:

L1437907-10 WG1784899: 8.55 at 16.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	888		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-10 WG1784566: at 25C

## Mercury by Method 7471A

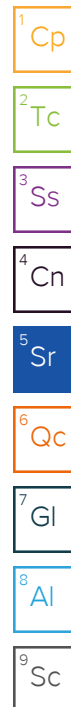
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 08:56	<a href="#">WG1784927</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	217		0.0852	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Cadmium	0.235	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Chromium	22.8		0.133	1.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Copper	12.1		0.400	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Lead	9.67		0.208	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Nickel	14.1		0.132	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Zinc	38.7		0.832	5.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.803		0.0167	0.200	1	12/08/2021 18:47	<a href="#">WG1784346</a>





## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.25		0.100	1.00	5	12/06/2021 23:33	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0375	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 15:24	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	103			77.0-120		12/09/2021 15:24	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Toluene	0.00285	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Total Xylenes	0.00116	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	102			75.0-131		12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	97.9			67.0-138		12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	98.0			70.0-130		12/07/2021 01:37	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.20	<a href="#">B</a>	0.769	4.00	1	12/06/2021 04:12	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	74.6			18.0-148		12/06/2021 04:12	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	82.8			23.0-120		12/09/2021 02:24	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	56.9			14.0-149		12/09/2021 02:24	<a href="#">WG1785524</a>
(S) <i>2</i> -Fluorobiphenyl	71.5			34.0-125		12/09/2021 02:24	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	4.87		1	12/08/2021 21:17	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	27.5		0.133	1.00	1	12/08/2021 13:04	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:04	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.23	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-11 WG1785392: 8.23 at 18.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1760		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-11 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 08:57	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	180		0.0852	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Cadmium	0.123	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Chromium	27.5		0.133	1.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Copper	9.09		0.400	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Lead	8.01		0.208	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Nickel	14.1		0.132	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Selenium	0.909	<a href="#">J</a>	0.764	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Zinc	34.1		0.832	5.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.355		0.0167	0.200	1	12/08/2021 18:50	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.06		0.100	1.00	5	12/06/2021 23:37	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0447	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 03:12	<a href="#">WG1787003</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/10/2021 03:12	<a href="#">WG1787003</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Toluene	0.00320	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Total Xylenes	0.00147	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	97.1			67.0-138		12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	102			70.0-130		12/07/2021 01:56	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.55	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:51	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	61.7			18.0-148		12/06/2021 02:51	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	92.2			23.0-120		12/09/2021 02:42	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	64.2			14.0-149		12/09/2021 02:42	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	80.6			34.0-125		12/09/2021 02:42	<a href="#">WG1785524</a>

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	10.9		1	12/08/2021 21:20	WG1784351

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	27.9		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:05	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.81	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-12 WG1785392: 8.81 at 18.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1740		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-12 WG1784566: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 08:59	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	181		0.0852	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Cadmium	0.171	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Chromium	27.9		0.133	1.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Copper	9.36		0.400	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Lead	7.73		0.208	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Nickel	13.8		0.132	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Zinc	33.2		0.832	5.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.25		0.0167	0.200	1	12/08/2021 18:53	<a href="#">WG1784346</a>

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.29		0.100	1.00	5	12/06/2021 23:40	<a href="#">WG1784892</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0390	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 16:07	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 16:07	<a href="#">WG1784377</a>

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Toluene	0.00332	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Total Xylenes	0.00134	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 02:15	<a href="#">WG1784988</a>
(S) Toluene-d8	101			75.0-131		12/07/2021 02:15	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/07/2021 02:15	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	100			70.0-130		12/07/2021 02:15	<a href="#">WG1784988</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.05	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 03:04	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	43.6			18.0-148		12/06/2021 03:04	<a href="#">WG1784356</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	97.3			23.0-120		12/09/2021 03:00	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	72.2			14.0-149		12/09/2021 03:00	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	88.4			34.0-125		12/09/2021 03:00	<a href="#">WG1785524</a>

Method Blank (MB)

(MB) R3738590-1 12/08/21 12:49

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1437907-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437907-05 12/08/21 12:54 • (DUP) R3738590-3 12/08/21 12:57

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	U	U	1	0.000		20

L1437915-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1437915-02 12/08/21 13:40 • (DUP) R3738590-8 12/08/21 13:40

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3738590-2 12/08/21 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.2	105	80.0-120	

L1437907-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-4 12/08/21 13:00 • (MSD) R3738590-5 12/08/21 13:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chromium,Hexavalent	20.0	U	13.1	15.9	65.3	79.6	1	75.0-125	J6		19.8	20

L1437907-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-7 12/08/21 13:03

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chromium,Hexavalent	633	U	875	138	50	75.0-125	J5

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



L1437633-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437633-05 12/06/21 12:00 • (DUP) R3737392-2 12/06/21 12:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.93	6.94	1	0.144		1

Sample Narrative:

OS: 6.93 at 19.7C

DUP: 6.94 at 19.4C



L1437633-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1437633-11 12/06/21 12:00 • (DUP) R3737392-3 12/06/21 12:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.45	6.50	1	0.772		1

Sample Narrative:

OS: 6.45 at 18.9C

DUP: 6.5 at 18.8C

Laboratory Control Sample (LCS)

(LCS) R3737392-1 12/06/21 12:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.2C

L1437995-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1437995-01 12/07/21 11:27 • (DUP) R3737871-3 12/07/21 11:27

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.71	7.73	1	0.259		1

Sample Narrative:

OS: 7.71 at 16.5C

DUP: 7.73 at 16.8C

Laboratory Control Sample (LCS)

(LCS) R3737871-1 12/07/21 11:27

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 17C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3738017-1 12/07/21 15:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 17.7C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3737705-1 12/07/21 06:07

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:

BLANK: at 25C

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3737705-3 12/07/21 06:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance		38.8	1	13.2		20

Sample Narrative:

DUP: at 25C

L1437907-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437907-05 12/07/21 06:07 • (DUP) R3737705-4 12/07/21 06:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	883	874	1	1.02		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3737705-2 12/07/21 06:07

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	258	96.2	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R3738333-1 12/08/21 09:15

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738333-2 12/08/21 09:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.525	105	80.0-120	

L1437633-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437633-01 12/08/21 09:19 • (MS) R3738333-3 12/08/21 09:21 • (MSD) R3738333-4 12/08/21 09:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.554	0.562	111	112	1	75.0-125			1.29	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3738366-1 12/08/21 08:20

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738366-2 12/08/21 08:22

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.514	103	80.0-120	

L1437916-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437916-20 12/08/21 08:24 • (MS) R3738366-3 12/08/21 08:26 • (MSD) R3738366-4 12/08/21 08:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.649	0.556	130	111	1	75.0-125	J5		15.5	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738225-1 12/07/21 17:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	1.17	U	0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3738225-2 12/07/21 17:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	103	103	80.0-120	
Cadmium	100	99.3	99.3	80.0-120	
Chromium	100	99.0	99.0	80.0-120	
Copper	100	99.0	99.0	80.0-120	
Lead	100	100	100	80.0-120	
Nickel	100	101	101	80.0-120	
Selenium	100	102	102	80.0-120	
Silver	20.0	17.5	87.4	80.0-120	
Zinc	100	98.7	98.7	80.0-120	

L1437186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437186-01 12/07/21 17:36 • (MS) R3738225-5 12/07/21 17:44 • (MSD) R3738225-6 12/07/21 17:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	175	260	270	85.2	95.2	1	75.0-125			3.78	20
Cadmium	100	0.592	98.5	100	97.9	99.8	1	75.0-125			1.95	20
Chromium	100	4.50	96.5	98.3	92.0	93.8	1	75.0-125			1.87	20
Copper	100	10.0	107	109	96.9	98.5	1	75.0-125			1.52	20
Lead	100	9.88	108	112	98.6	102	1	75.0-125			3.01	20
Nickel	100	8.93	109	111	99.9	102	1	75.0-125			1.83	20
Selenium	100	U	86.6	90.2	86.6	90.2	1	75.0-125			4.02	20
Silver	20.0	U	17.7	18.1	88.6	90.6	1	75.0-125			2.22	20
Zinc	100	34.1	121	124	86.5	90.1	1	75.0-125			2.94	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3738497-1 12/08/21 12:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	0.124	U	0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	U		0.400	2.00
Lead	0.211	U	0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3738497-2 12/08/21 12:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	94.4	94.4	80.0-120	
Chromium	100	93.3	93.3	80.0-120	
Copper	100	95.7	95.7	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	95.3	95.3	80.0-120	
Selenium	100	93.9	93.9	80.0-120	
Silver	20.0	16.9	84.6	80.0-120	
Zinc	100	93.9	93.9	80.0-120	

L1437907-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-05 12/08/21 12:18 • (MS) R3738497-5 12/08/21 12:26 • (MSD) R3738497-6 12/08/21 12:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	160	249	248	89.8	88.1	1	75.0-125			0.696	20
Cadmium	100	0.138	96.0	95.6	95.9	95.4	1	75.0-125			0.446	20
Chromium	100	27.0	118	117	90.9	90.3	1	75.0-125			0.582	20
Copper	100	7.85	104	104	96.5	95.9	1	75.0-125			0.624	20
Lead	100	6.94	107	106	99.7	99.5	1	75.0-125			0.168	20
Nickel	100	13.9	114	113	100	99.4	1	75.0-125			0.688	20
Selenium	100	1.70	93.9	93.3	92.2	91.6	1	75.0-125			0.652	20
Silver	20.0	U	17.2	16.9	86.1	84.5	1	75.0-125			1.84	20
Zinc	100	32.3	123	122	90.5	90.1	1	75.0-125			0.334	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3739014-1 12/08/21 18:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3739014-2 12/08/21 18:06 • (LCSD) R3739014-3 12/08/21 18:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.992	0.987	99.2	98.7	80.0-120			0.578	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3737645-1 12/06/21 22:01

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3737645-2 12/06/21 22:04

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	90.3	90.3	80.0-120	

L1437186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437186-01 12/06/21 22:08 • (MS) R3737645-5 12/06/21 22:18 • (MSD) R3737645-6 12/06/21 22:21

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	2.72	84.0	91.1	81.3	88.4	5	75.0-125			8.11	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738466-1 12/08/21 12:30

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3738466-2 12/08/21 12:34

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	108	108	80.0-120	

L1437907-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-05 12/08/21 12:37 • (MS) R3738466-5 12/08/21 12:47 • (MSD) R3738466-6 12/08/21 12:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	4.00	102	102	97.9	98.4	5	75.0-125			0.543	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738819-2 12/09/21 07:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3738819-1 12/09/21 05:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.32	115	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			103	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3739287-3 12/09/21 19:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	110			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3739287-2 12/09/21 18:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.21	94.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			98.3	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3739529-3 12/10/21 16:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3739529-2 12/10/21 15:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.13	93.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738030-3 12/07/21 06:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	99.8			67.0-138
(S) 1,2-Dichloroethane-d4	103			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3738030-1 12/07/21 05:44 • (LCSD) R3738030-2 12/07/21 06:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.109	88.0	87.2	70.0-123			0.913	20
Ethylbenzene	0.125	0.108	0.107	86.4	85.6	74.0-126			0.930	20
Toluene	0.125	0.106	0.106	84.8	84.8	75.0-121			0.000	20
Xylenes, Total	0.375	0.320	0.323	85.3	86.1	72.0-127			0.933	20
(S) Toluene-d8				99.9	98.0	75.0-131				
(S) 4-Bromofluorobenzene				100	102	67.0-138				
(S) 1,2-Dichloroethane-d4				114	115	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3737911-3 12/06/21 22:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	0.00130	U	0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	99.4			67.0-138
(S) 1,2-Dichloroethane-d4	95.6			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3737911-1 12/06/21 21:10 • (LCSD) R3737911-2 12/06/21 21:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.110	88.0	88.0	70.0-123			0.000	20
Ethylbenzene	0.125	0.113	0.116	90.4	92.8	74.0-126			2.62	20
Toluene	0.125	0.112	0.110	89.6	88.0	75.0-121			1.80	20
Xylenes, Total	0.375	0.333	0.326	88.8	86.9	72.0-127			2.12	20
(S) Toluene-d8				103	101	75.0-131				
(S) 4-Bromofluorobenzene				102	100	67.0-138				
(S) 1,2-Dichloroethane-d4				107	110	70.0-130				

L1436873-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1436873-01 12/06/21 22:26 • (MS) R3737911-4 12/07/21 04:47 • (MSD) R3737911-5 12/07/21 05:06

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.129	U	0.116	0.105	93.5	84.7	1	10.0-149			9.95	37
Ethylbenzene	0.129	U	0.119	0.111	96.0	89.5	1	10.0-160			6.96	38
Toluene	0.129	0.00163	0.119	0.111	94.7	88.2	1	10.0-156			6.96	38
Xylenes, Total	0.386	0.00151	0.352	0.331	94.2	88.6	1	10.0-160			6.15	38
(S) Toluene-d8					101	101		75.0-131				
(S) 4-Bromofluorobenzene					99.4	99.9		67.0-138				
(S) 1,2-Dichloroethane-d4					103	104		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3737266-1 12/05/21 22:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	2.20	J	0.769	4.00
(S) o-Terphenyl	61.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3737266-2 12/05/21 23:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	41.0	82.0	50.0-150	
(S) o-Terphenyl			98.6	18.0-148	

L1437907-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-09 12/06/21 03:18 • (MS) R3737266-3 12/06/21 03:31 • (MSD) R3737266-4 12/06/21 03:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	48.8	1.08	25.1	32.4	51.4	66.4	1	50.0-150		J3	25.4	20
(S) o-Terphenyl					53.2	71.7		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738822-2 12/08/21 22:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	87.9			14.0-149
(S) 2-Fluorobiphenyl	103			34.0-125
(S) p-Terphenyl-d14	119			23.0-120

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0652	81.5	50.0-126	
Acenaphthene	0.0800	0.0684	85.5	50.0-120	
Acenaphthylene	0.0800	0.0692	86.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0660	82.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0599	74.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0694	86.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0660	82.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0696	87.0	49.0-125	
Chrysene	0.0800	0.0660	82.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0653	81.6	47.0-125	
Fluoranthene	0.0800	0.0652	81.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0645	80.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0688	86.0	46.0-125	
Naphthalene	0.0800	0.0577	72.1	50.0-120	
Phenanthrene	0.0800	0.0685	85.6	47.0-120	
Pyrene	0.0800	0.0661	82.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0701	87.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0665	83.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0666	83.3	50.0-120	
(S) Nitrobenzene-d5			95.7	14.0-149	
(S) 2-Fluorobiphenyl			97.4	34.0-125	
(S) p-Terphenyl-d14			97.7	23.0-120	

L1437915-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-01 12/08/21 22:51 • (MS) R3738822-3 12/08/21 23:09 • (MSD) R3738822-4 12/08/21 23:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0768	U	0.0430	0.0409	56.0	53.3	1	10.0-145			5.01	30
Acenaphthene	0.0768	U	0.0436	0.0415	56.8	54.0	1	14.0-127			4.94	27
Acenaphthylene	0.0768	U	0.0431	0.0418	56.1	54.4	1	21.0-124			3.06	25
Benzo(a)anthracene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-139			3.82	30
Benzo(a)pyrene	0.0768	U	0.0459	0.0442	59.8	57.6	1	10.0-141			3.77	31
Benzo(b)fluoranthene	0.0768	U	0.0411	0.0393	53.5	51.2	1	10.0-140			4.48	36
Benzo(g,h,i)perylene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-140			3.82	33
Benzo(k)fluoranthene	0.0768	U	0.0393	0.0385	51.2	50.1	1	10.0-137			2.06	31
Chrysene	0.0768	U	0.0431	0.0409	56.1	53.3	1	10.0-145			5.24	30
Dibenz(a,h)anthracene	0.0768	U	0.0415	0.0400	54.0	52.1	1	10.0-132			3.68	31
Fluoranthene	0.0768	U	0.0433	0.0422	56.4	54.9	1	10.0-153			2.57	33
Fluorene	0.0768	U	0.0414	0.0398	53.9	51.8	1	11.0-130			3.94	29
Indeno(1,2,3-cd)pyrene	0.0768	U	0.0450	0.0432	58.6	56.3	1	10.0-137			4.08	32
Naphthalene	0.0768	U	0.0337	0.0321	43.9	41.8	1	10.0-135			4.86	27
Phenanthrene	0.0768	U	0.0437	0.0427	56.9	55.6	1	10.0-144			2.31	31
Pyrene	0.0768	U	0.0442	0.0416	57.6	54.2	1	10.0-148			6.06	35
1-Methylnaphthalene	0.0768	U	0.0469	0.0451	61.1	58.7	1	10.0-142			3.91	28
2-Methylnaphthalene	0.0768	U	0.0421	0.0399	54.8	52.0	1	10.0-137			5.37	28
2-Chloronaphthalene	0.0768	U	0.0289	0.0274	37.6	35.7	1	29.0-120			5.33	24
(S) Nitrobenzene-d5					52.7	47.1		14.0-149				
(S) 2-Fluorobiphenyl					59.6	55.9		34.0-125				
(S) p-Terphenyl-d14					62.2	58.8		23.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

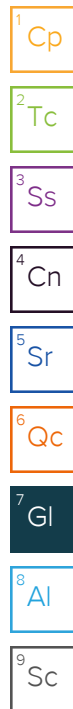
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122


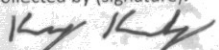
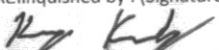
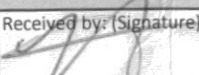

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



<b>Caerus Oil &amp; Gas LLC</b> <b>143 Diamond Avenue</b> <b>Parachute, CO 81635</b> <b>970-285-9606</b>				Billing Information:				Analysis / Container / Preservative										Chain of Custody Page <u>1</u> of <u>2</u>					
				Same as above														 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859					
Report to: <b>bmiddleton@caerusoilandgas.com</b>				Email To: <b>bmiddleton@caerusoilandgas.com</b>																			
Project Description: <b>Hatch Gulch Pig Launcher</b>				City/State Collected: <b>Piceance, CO</b>																			
Phone:		Client Project #		Lab Project #																			
Fax:		<b>HGPG</b>		<b>HGPG</b>																			
Collected by (print): <b>KOZBY KENNEDY</b>		Site/Facility ID #		P.O. #																			
		<b>HGPG</b>		<b>HGPG</b>																			
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #																			
Immediately Packed on Ice <input type="checkbox"/> N <input checked="" type="checkbox"/> Y <input type="checkbox"/> X				Date Results Needed <u>Standard TAT</u>																			
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH - GRO/DRO	BTEX	TABLE 910- PAH's	SAR, EC, pH	TABLE 910- Metals											
20211201-HATCH GULCH (PH-1) @ 1'-2'		G	SS	1'-2'	12/1/21	10:35	2	X	X	X	X	X					-05						
20211201-HATCH GULCH (PH-1) @ 3'-4'		G	SS	3'-4'		10:50	2	X	X	X	X	X					-02						
20211201-HATCH GULCH (PH-1) @ 5'-6'		G	SS	5'-6'		11:00	2	X	X	X	X	X					-07						
20211201-HATCH GULCH (PH-2) @ 1'-2'		G	SS	1'-2'		11:08	2	X	X	X	X	X					-24						
20211201-HATCH GULCH (PH-2) @ 3'-4'		G	SS	3'-4'		11:15	2	X	X	X	X	X					-06						
20211201-HATCH GULCH (PH-2) @ 5'-6'		G	SS	5'-6'		11:20	2	X	X	X	X	X					-24						
20211201-HATCH GULCH (PH-3) @ 1'-2'		G	SS	1'-2'		11:25	2	X	X	X	X	X					-27						
20211201-HATCH GULCH (PH-3) @ 3'-4'		G	SS	3'-4'		11:33	2	X	X	X	X	X					-20						
20211201-HATCH GULCH (PH-3) @ 5'-6'		G	SS	5'-6'		11:40	2	X	X	X	X	X					-24						
20211201-HATCH GULCH (PH-4) @ 1'-2'		G	SS	1'-2'		11:45	2	X	X	X	X	X					-20						
* Matrix: SS - Soil   AIR - Air   F - Filter GW - Groundwater   B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks:  Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier										Tracking # 5016 1232 0021										Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input type="checkbox"/> Y <input type="checkbox"/> N	
Relinquished by: (Signature) 		Date: 12/1/21	Time: 17:00	Received by: (Signature) 		Trip Blank Received: Yes/No HCL / MeOH TBR																	
Relinquished by: (Signature) 		Date: 12/2/21	Time: 1500	Received by: (Signature)		Temp: 3.8 to 3.5 °C Bottles Received: 24												If preservation required by Login: Date/Time					
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) T. Robertson		Date: 12/3/21 Time: 900												Hold: Condition: NCF / OK					



Condition  
NCF / O